ABSTRACT:

In the field of geoinformation, geographic information can be converted into plan in the form of two dimensional (2D) using geomatic method that is using tacheometric technique and total station instrumentation. Topographic and thematic maps in 2D can be produced using photogrammetric technique. In photogrammetry, the three dimensional (3D) stereomodel can be used to generate 3D model. Today, 3D model can be generated using various techniques and there exists an increasing need to use 3D model in various fields such as civil engineering, architecture, archaeology, town planning, automotive industry and others especially for visualization applications. 3D model also can be generated using aerial photogrammetry and close range photogrammetry methods to generate 3D model of the earth surface and objects located on it. Several photogrammetric softwares provide different accuracy of 3D model which can be used to generate 3D model such as Erdas Imagine, Topcon PI 3000 Image Master, Leica Photogrammetric Suite, VirtuoZo and others. This paper presents the use of photogrammetric technique to effectively generate three dimensional (3D) model of Universiti Teknologi Malaysia campus. The software used are Erdas IMAGINE, SpacEyes3D Builder, Google SketchUp as well as AutoCAD Map. The processing procedure of the system is described briefly in this paper. Sets of measurements (length, width, and height) of selected buildings were obtained. The results obtained from these software were compared with ground survey measurement. The results showed that an accuracy of sub-meter of ±0.491m could be obtained from the Erdas Imagine software and it is superior compared with the other two softwarea. Finally, all the software used are suitable for 3D modelling.